DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MIRROR LAKE 17.16 Lake Area (ha): Maximum depth (m): Town: WHITEFIELD 7.0 County: Coos Mean depth (m): 2.3 River Basin: Connecticut Volume (m³): 399000 Relative depth: Latitude: 44°23'16" N Longitude: 71°36'26" W 1.5 1.23 Shore configuration: Elevation (ft): 1035
Shore length (m): 1800
Watershed area (ha): 215.0
% watershed ponded: 0.0 Areal water load (m/yr): 5.98 Flushing rate (yr⁻¹): 2.60 P retention coeff.: 0.63 Lake type: natural w/dam

BIOLOGICAL:	10 January 1995	8 August 1994
DOM. PHYTOPLANKTON (% TOTAL) #1	SYNURA 65%	TABELLARIA 35%
#2	ASTERIONELLA 25%	DINOBRYON 30%
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		3.46
DOM. ZOOPLANKTON (% TOTAL) #1	KELLICOTTIA 31%	NAUPLIUS LARVA 31%
#2	KERATELLA 21%	KERATELLA 28%
#3	ASPLANCHNA 15%	CYCLOPOID COPEPOD 14%
ROTIFERS/LITER	61	108
MICROCRUSTACEA/LITER	6	122
ZOOPLANKTON ABUNDANCE (#/L)	72	239
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		3.0
BOTTOM DISSOLVED OXYGEN (mg/L)	6.2	0.1
BACTERIA (E. coli, #/100 ml) #1		1
#2		< 1
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.3
Hypolimnion volume (m³): 23000
Anoxic volume (m³): 48500

CHEMICAL: Lake: MIRROR LAKE Town: WHITEFIELD					
	10 January 1995		8 August 1994		
DEPTH (m)	2.0	4.0	1.0	3.5	5.5
pH (units)	6.4	6.3	6.8	6.9	6.5
A.N.C. (Alkalinity)	11.2	11.2	9.7	10.6	14.6
NITRATE NITROGEN	0.12	0.13	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.58	0.66	0.49	0.41	0.62
TOTAL PHOSPHORUS	0.011	0.009	0.016	0.011	0.026
CONDUCTIVITY (µmhos/cm)	137.0	143.8	136.0	125.0	140.8
APPARENT COLOR (cpu)	33	33	33	37	50
MAGNESIUM			1.62		
CALCIUM			6.2		
SODIUM			15.9		
POTASSIUM			1.83		
CHLORIDE	32	32	30		30
SULFATE	7	8	7		6
TN : TP	64	88	31		24
CALCITE SATURATION INDEX			2.7		

All results in mg/L unless indicated otherwise

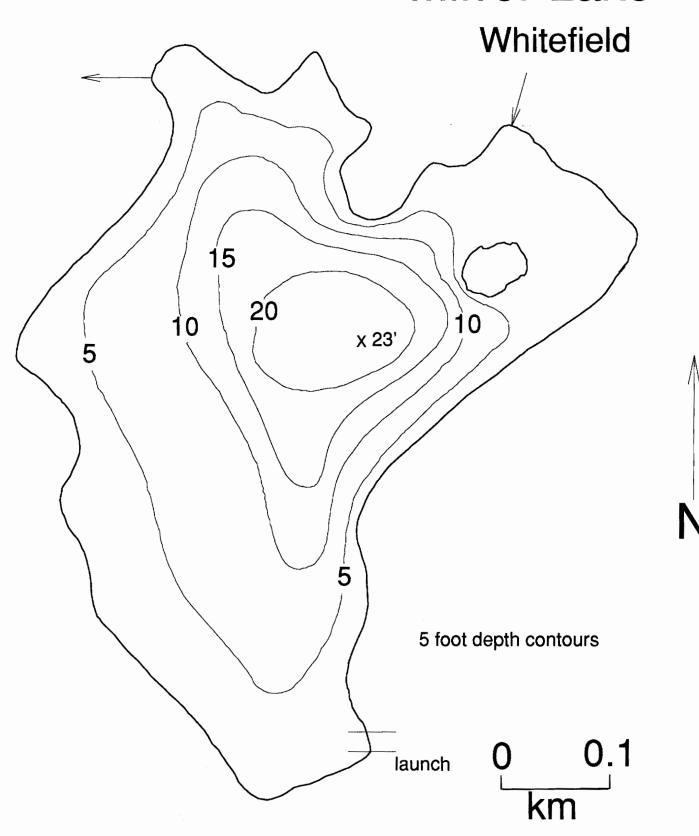
TROPHIC CLASSIFICATION: 1994

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	3	1	0	8	Meso.

COMMENTS:

- 1. AKA Blake Pond.
- 2. This pond was previously surveyed and classified in 1979. There was no change in water quality or classification between the two dates.
- 3. Elevated sodium and chloride levels suggest salt runoff into the pond.
- 4. Sonar (depth) readings were erratic; the lake bottom may be more irregular than depicted on the depth contour map.
- 5. Good boat launch site; parking for 5 to 6 trailers.

Mirror Lake



FIELD DATA SHEET

TOWN: WHITEFIELD

LAKE: MIRROR LAKE

DATE: 08/08/94 WEATHER: SUNNY

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	25.0	8.8	105 %
1.0	23.0	8.6	99 %
2.0	22.0	8.4	95 %
3.0	20.0	6.5	71 %
4.0	17.0	0.8	8 %
5.0	12.0	0.1	1 %
6.0	11.0	0.1	1 %
		AND	
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SECCHI DISK (m): 3.0 COMMENTS:

BOTTOM DEPTH (m): 6.3

TIME: 1335

*Dissolved oxygen values are in mg/L

Mirror Lake wetland Whitefield wetland wetland wetland V N d d S C W C S E S G beach 0.1

AQUATIC PLANT SURVEY

LAK	E: MIRROR LAKE	TOWN: WHITEFIELD	DATE: 08/08/94	
Key	PLANT	ADIMDANCE		
кеу	GENERIC	COMMON	ABUNDANCE	
G	Gramineae	Grass family	Sparse	
T	Typha	Cattail	Sparse	
U	Utricularia	Bladderwort	Sparse	
N	Nymphaea	White water lily	Scattered	
W	Potamogeton	Pondweed	Sparse	
E	Eriocaulon septangulare	Pipewort	Scattered	
S	Sparganium	Bur reed	Sparse	
d	Dulichium arundinaceum	Three-way sedge	Sparse	
Y	Nuphar	Yellow water lily	Sparse	
С	Cyperaceae	non-flowering sedge	Sparse	

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

- Wetlands were present along the northern shore.
- 2. Clumps of algae were observed in the water.
- 3. Most plants were up close to shore -- not a hindrance to boating.